



III.B.1.b

THE CITY OF REDMOND PLANNING DEPARTMENT

TO: Mayor Ives
Redmond City Council

FROM: Cathy Beam, AICP, Principal Environmental Planner

DATE: April 5, 2005

SUBJECT: L040378, Critical Areas Ordinance Update

Attached are the following materials that were requested at the Council's March 29 study session.

- Attachment A: Table of wetland exemptions in other jurisdictions;
- Attachment B: Decision authority options pros and cons for the public project reasonable use provision;
- Attachment C: Flow chart of project review processes;
- Attachment D: Updated Council Focus List and Information Requests matrix; and
- Attachment E: DOE Wetland Rating Form.

I will be giving a brief staff report to discuss the above listed items at the Council's April 5 regular business meeting. I can be reached at 425-556-2429 or cbeam@redmond.gov if you have any questions concerning the enclosed materials.

O:\Cathy\CAO Update\March 31st CC Memo

ATTACHMENT A

WETLAND EXEMPTIONS

DOE BAS	King County	Bothell	Kirkland	Woodinville	Bellevue	Renton	Edmonds
No exemption for small wetlands. It is not possible to conclude from size alone what functions and values a particular wetland is providing.	No minimum wetland size exemption.	No minimum wetland size exemption.	Activities affecting Type 3 wetlands that are 1,000 sq.ft. or less in any of the primary basins, or affecting Type 3 wetlands that are 2,500 sq.ft. or less in any of the secondary basins.	No minimum wetland size exemption.	Information not yet available.	Any activity affecting hydrologically isolated Category 3 wetland no greater than 2,500 sq.ft. consistent with all of the following criteria: (1) standing water is not present sufficient enough to support breeding amphibians, (2) listed species are not present, (3) some form of mitigation is provided for hydrologic and water quality functions, and (4) a wetland assessment is prepared.	No minimum wetland size exemption.

ATTACHMENT B

PUBLIC PROJECT REASONABLE USE PROVISION DECISION AUTHORITY OPTIONS

Issue: What process should be used to allow intrusion into established Native Growth Protection Easements (core wildlife areas) and steep slopes?

HEARING EXAMINER DECISION

Pros	Cons
<ul style="list-style-type: none">Same authority that reviews private projects	<ul style="list-style-type: none">Adds time to projects
<ul style="list-style-type: none">Provides one more level of protection that it's not a staff driven decision	<ul style="list-style-type: none">Adds money to projects
<ul style="list-style-type: none">Provides avenue to demonstrate the City's upholding the same standards	<ul style="list-style-type: none">Becomes a quasi-judicial matter thus limiting Council contact in case of an appeal
<ul style="list-style-type: none">Provides a public forum	<ul style="list-style-type: none">Treats slopes and NGPEs radically different from other critical areas reviewed and approved by the Technical Committee

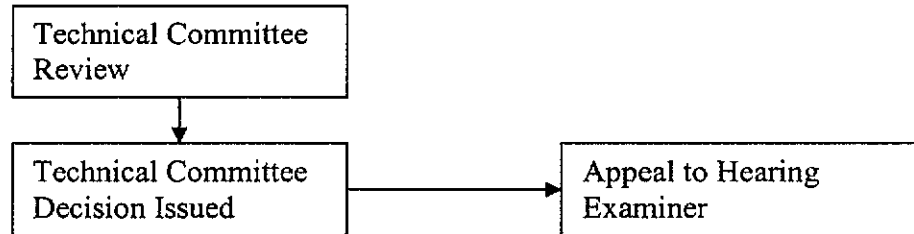
TECHNICAL COMMITTEE DECISION

Pros	Cons
<ul style="list-style-type: none">Ability to work out solutions internally with technical staff	<ul style="list-style-type: none">Public concern that staff may not be an objective viewer of the facts
<ul style="list-style-type: none">Can review criteria and provide documentation without Hearing Examiner	<ul style="list-style-type: none">No public notification
<ul style="list-style-type: none">Public can still appeal decision	<ul style="list-style-type: none">No public forum

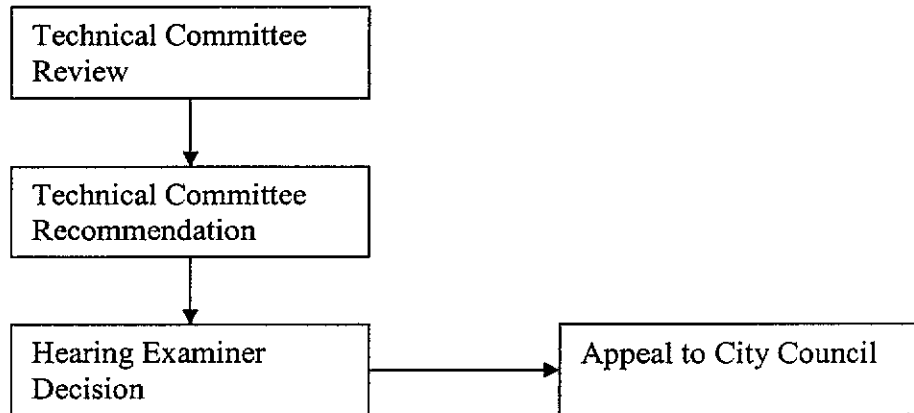
ATTACHMENT C

CURRENT PROJECT REVIEW PROCESSES

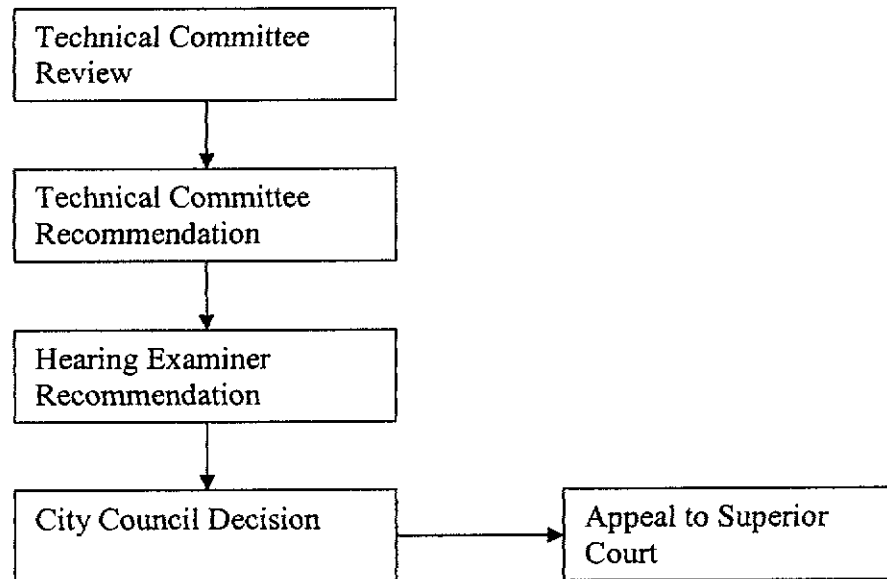
Type II: Administrative Review (Private and Public Projects) – Application
Examples include Site Plan Entitlement, Shoreline Permit



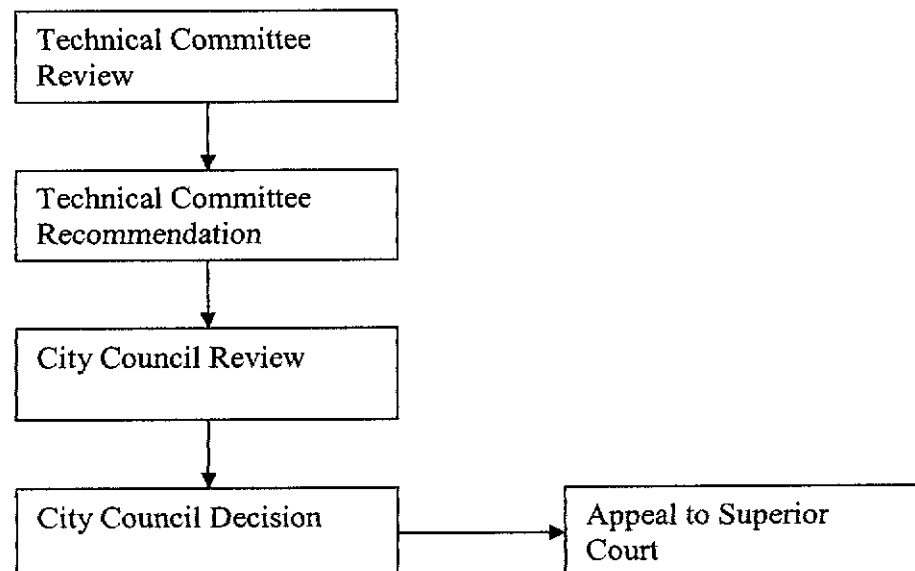
Type III: Quasi-Judicial Hearing Examiner Review (Private and Public Projects) –
Application examples include *Reasonable Use Exception(private projects)*, Variance



Type IV: Quasi-Judicial City Council with Hearing Examiner Recommendation (Private and Public Projects) – Application examples include Conditional Use, Current Public Project Alteration of Wildlife Habitat Areas



Type V: Quasi-Judicial City Council (Private and Public Projects) – Application examples include Long Term Temporary Use, Current Sensitive Areas Exception for Streets and/or Utilities



ATTACHMENT D

Critical Areas Ordinance Update, L040378

Focus for the Update

Council List to Reach Decision

Item No.	Item	Staff Input	Council Discussion and Conclusion
1	Trail Exemption	<ul style="list-style-type: none"> ▪ BAS Rule requires reevaluation of exemptions, those activities which are exempt from critical areas regulation. ▪ Trail exemption was modified to better reflect BAS and respond to public testimony. ▪ Trail exemption currently allows trail preferably constructed of permeable materials, designed to minimize impact on sensitive areas, and a maximum corridor width of ten feet. ▪ Proposed trail exemption allows construction of trails which are permeable, have a maximum width of five feet, and are located in the outer 25% of a buffer. ▪ Trails that are not exempt would be subject to the proposed regulations. ▪ See page 6 of the proposed Critical Areas Ordinance for the trail exemption language. 	The Council clarified trails that don't qualify for the exemption would be treated like all other projects subject to the Critical Areas Ordinance. Mitigation is required for all unavoidable impacts.
2.	Wetland Exemption	<ul style="list-style-type: none"> ▪ Exemption for activities affecting Type IV wetlands which are individually smaller than 2,500 sq. ft. and/or cumulatively smaller than 10,000 sq. ft. in size was eliminated. ▪ Scientific literature does not support the exemption of small wetlands from protection. Research has emphasized the importance of small wetlands in providing habitat requirements and in performing important ecological processes. ▪ Exempting regulation of these smaller wetlands will result in a net loss of functions 	The Council understands both the requirement for wetland BAS and the practical and administrative issues in regulating very small wetlands. The general consensus of the Council is to have a minimum threshold wetland size under which smaller wetlands would not be regulated.

Item No.	Item	Staff Input	Council Discussion and Conclusion
		<p>and values.</p> <ul style="list-style-type: none"> See page 266 of the existing Sensitive Areas Ordinance for the current small wetland exemption language. 	
3.	Wetland Buffers	<ul style="list-style-type: none"> BAS Rule requires City reevaluate wetland buffer widths. Staff relied on BAS developed by the Dept. of Ecology, using their document <i>Guidance for Protecting and Managing Wetlands</i>. DOE provides for a buffer approach specifically developed to assist urban and urbanizing jurisdictions where fixed buffer widths may not match particular site conditions or may be impossible to achieve. Proposed buffer width ranges are larger than current buffer regulations. Buffer width averaging and buffer width reductions are proposed under specified circumstances. See page 29 through 33 in the proposed Critical Areas Ordinance for wetland buffer requirements. See also wetland comparison table handout. 	<p>There was a general discussion of the proposed buffer approach established by DOE for urban jurisdictions. Questions were raised to help better understand the proposed wetland classification system and DOE scoring sheets.</p>
4.	Stream Classification System	<ul style="list-style-type: none"> BAS Rule requires City reevaluate stream classification system. Current system has no protection for non-salmonid fish. Proposed stream classification system is a hybrid of the City's current stream classification system and the State Dept. of Natural Resources' stream typing system. BAS revealed stream channel width is 	<p>Issue raised but very little discussion. Continue at next study session.</p>

Item No.	Item	Staff Input	Council Discussion and Conclusion
		<p>irrelevant with respect to the functions and values of a stream.</p> <ul style="list-style-type: none"> ▪ Headwaters provide a source of cold, clean water. Cold water being very important as many streams have temperatures lethal to fish. ▪ Current Class I and II streams are the same as the proposed Class I and II streams. ▪ Proposed Class III streams include streams with or with the potential for non-salmonid fish; and headwater streams. ▪ Proposed Class IV streams include all other natural streams. According to BAS, these streams provide a valuable role in sediment removal, erosion control, pollutant removal, and water temperature protection. ▪ See page 20 in the proposed Critical Areas Ordinance for riparian stream corridor classification system. 	
5.	Class IV Stream Buffers	<ul style="list-style-type: none"> ▪ Current Class IV streams, which have a channel width of less than two feet, are currently exempt and do not require buffers. ▪ Proposed Class IV streams, as defined above, will require buffers – 36 ft. for perennial streams and 25 ft. for intermittent stream. ▪ According to BAS, these streams provide a valuable role in sediment removal, erosion control, pollutant removal, and water temperature protection. ▪ See page 20 in the proposed Critical Areas Ordinance for Class IV stream buffers. 	

Item No.	Item	Staff Input	Council Discussion and Conclusion
6.	Approach for Wildlife Habitat Protection	<ul style="list-style-type: none"> ▪ The Growth Management Act identifies Fish and Wildlife Habitat Conservation Areas. ▪ Proposed approach for wildlife habitat protection involves two key protection mechanisms/strategies. ▪ New approach better supported by BAS. ▪ Proposed Core Preservation Areas form the backbone of the wildlife network and are areas already protected through other regulatory mechanisms. ▪ Species protection applies to Species of Concern (traditionally federally and state listed species) and Species of Local Importance. Development in these areas is regulated through a series of management recommendations. ▪ Second tier of wildlife habitat protection called Quality Habitat Areas, which provide significant wildlife value by virtue of their characteristics. Protection of these habitats is not mandated or regulated. This is a combination of voluntary, advisory, and incentive-based approach. ▪ See pages 19 through 20 and page 25 of the proposed Critical Areas Ordinance for the approach to wildlife habitat protection. 	
7.	Species of Local Importance	<ul style="list-style-type: none"> ▪ Under the Growth Management Act, <i>habitats and species of local importance</i> are one of the classifications of Fish and Wildlife Habitat Conservation. ▪ Species of Local Importance are defined as those species that possess unusual or unique 	

Item No.	Item	Staff Input	Council Discussion and Conclusion
		<p>habitat warranting protection because of qualitative species diversity or habitat system health indicators. It may also include species which are culturally important to the City.</p> <ul style="list-style-type: none"> ▪ The proposal recommends identifying Great Blue Heron as a Species of Local Importance and removing raptors, particularly the red-tailed hawk. ▪ The Development Guide Amendment process is identified as the appropriate process for adding or removing Species of Local Importance. ▪ See pages 18 and 19 of the proposed Critical Areas Ordinance for information on Species of Local Importance. 	
8.	Public Projects Alteration of Wildlife Habitat Areas	<ul style="list-style-type: none"> ▪ Current regulations have a provision to exempt public projects from meeting the requirements of wildlife habitat protection when the regulations would prohibit the development of a project by a public agency. ▪ BAS provides no justification for exempting public projects from compliance with wildlife habitat development regulations. ▪ Planning Commission concern over equity – requiring private projects to meet a set of standards while exempting public projects. ▪ Perhaps more of an issue with process rather than outcome. City projects still need to meet federal and state regulations. ▪ If remove exemption as proposed, would need to establish a public project reasonable use provision. 	<p>Council deliberated this difficult issue, raising various points. If the CAO Update is based on BAS, it seems it would be an incongruity to exempt public projects. Public projects are still required to do mitigation. It comes down to a philosophical question and one of public perception. Many public projects have been done very well and provide great public benefit. Private projects provide public benefit as well and shouldn't be discounted. There is reason and rational to provide a public projects "reasonable use provision", similar to that which is currently provided for private projects. This is the general consensus of the Council.</p> <p>An equally important issue germane to this topic is who should have the authority to</p>

Item No.	Item	Staff Input	Council Discussion and Conclusion
		<ul style="list-style-type: none"> See page 274 of the existing Sensitive Areas Ordinance for the current public projects exception language. 	<p>approve a public projects reasonable use request. The private sector demonstrates their case for reasonable use to the Hearing Examiner (HE). The Council debated whether the Technical Committee (TC) or HE should make this decision for public projects. It may be a matter of public perception. The HE provides one more level of protection that it's not a staff driven decision and provides an avenue to demonstrate the City is upholding the same standards. The HE also provides a public forum. On the other hand, the HE process adds time and consequently money on to City projects. It also would make these decisions quasi-judicial thus limiting Council contact in case of an appeal.</p>

Critical Areas Ordinance Update, L040378
Issues and Information Requests Identified by the Council

Issue No.	Meeting Date	Issue or Information Request	Council Discussion or Question	Staff Response
1	3/8/05	King County wetlands and streams (Richard)	What types of buffers is the County using for wetlands and streams?	A copy of King County's handouts entitled <i>Wetland Considerations</i> and <i>Aquatic Areas Considerations</i> were placed in each councilmembers' in-box on 3/10/05. These handouts provide information on the KC CAO's wetland and streams classification systems and buffers.
2.	3/8/05	DOE buffer alternatives (Richard)	Council would like to get a copy of DOE's three buffer approaches.	A copy of DOE's guide on wetland buffer widths was placed in each councilmembers' in-box on 3/10/05.
3.	3/29/05	Flow chart of process review (Jim)	A flow chart comparing current public and private project review processes would provide a useful tool for Council in understanding public project review.	Current Project Review Process flow chart placed in each councilmembers' in-box on 3/31/05.
4.	3/29/05	Public project "reasonable use" decision authority (Nancy)	Provide a list of pros and cons for Technical Committee decision versus Hearing Examiner decision on public project reasonable use provision.	Public Project Reasonable Use Provision Decision Authority Options chart placed in each councilmembers' in-box on 3/31/05.

Issue No.	Meeting Date	Issue or Information Request	Council Discussion or Question	Staff Response
5.	3/29/05	Minimum wetland size exemption (Richard)	Provide information on other jurisdictions' approaches regarding minimum wetland size exemptions, if any.	Wetland Exemptions comparison table placed in each councilmembers' in-box on 3/31/05.
6.	3/29/05	DOE wetland scoring sheets (Richard)	Council would like a copy of DOE's wetland scoring sheets used to determine wetland classification and habitat values.	Copy of DOE's Wetland Rating Form for Western Washington placed in each councilmembers' in-box on 3/31/05.
7.				
8.				
9.				
10.				

ATTACHMENT E

DRAFT WETLAND RATING FORM – WESTERN WASHINGTON

Name of wetland (if known): _____

Location: SEC: ____ TOWNSHIP: ____ RANGE: ____ (attach map with outline of wetland to rating form)

Person(s) Rating Wetland: _____ Affiliation: _____ Date of site visit: ____

DRAFT SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ____ II ____ III ____ IV ____

Category I = Score >70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions

Score for Hydrologic Functions

Score for Habitat Functions

TOTAL score for functions

Category based on SPECIAL CHARACTERISTICS of wetland

I ____ II ____ Does not Apply ____

Final Category (choose the “highest” category from above)

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Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class
Estuarine	Depressional
Natural Heritage Wetland	Riverine
Bog	Lake-fringe
Mature Forest	Slope
Old Growth Forest	Flats
Coastal Lagoon	Freshwater Tidal
Interdunal	
None of the above	

Does the wetland being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That Need Special Protection, and That Are Not Included in the Rating	YES	NO
SP1. <i>Has the wetland been documented as a habitat for any Federally listed Threatened or Endangered plant or animal species (T/E species)?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		
SP2. <i>Has the wetland been documented as habitat for any State listed Threatened or Endangered plant or animal species?</i> For the purposes of this rating system, "documented" means the wetland is on the appropriate state database.		
SP3. <i>Does the wetland contain individuals of Priority species listed by the WDFW for the state?</i>		
SP4. <i>Does the wetland have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Vegetated Wetlands for Western Washington

Wetland Name: _____

Date: _____

1. Are the water levels in the wetland usually controlled by tides (i.e. except during floods)?

NO – go to 2

YES – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).*

2. Is the topography within the wetland flat and precipitation is only source (>90%) of water to it.

NO – go to 3

YES – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the wetland **meet both** of the following criteria?

____ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) where at least 20 acres (8 ha) are permanently inundated (ponded or flooded);

____ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

NO – go to 4

YES – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the wetland **meet all** of the following criteria?

____ The wetland is on a slope (*slope can be very gradual*),

____ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

____ The water leaves the wetland **without being impounded**?

NOTE: *Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).*

NO - go to 5

YES – The wetland class is **Slope**

5. Is the wetland in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river? The flooding should occur at least once every two years, on the average, to answer "yes." *The wetland can contain depressions that are filled with water when the river is not flooding.*

NO - go to 6

YES – The wetland class is **Riverine**

6. Is the wetland in a topographic depression in which water ponds, or is saturated to the surface, at some time of the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 YES – The wetland class is **Depressional**

7. Is the wetland located in a very flat area with no obvious depression and no stream or river running through it and providing water. The wetland seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 YES – The wetland class is **Depressional**

8. Your wetland seems to be difficult to classify. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. Sometimes we find characteristics of several different hydrogeomorphic classes within one wetland boundary. Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland being rated. If the area of the second class is less than 10% classify the wetland using the first class.

<i>HGM Classes Within a Delineated Wetland Boundary</i>	<i>Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D Depressional and Flats Wetlands		Points
WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality		
D	D 1. Does the wetland have the <u>potential</u> to improve water quality? (see p. 38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Wetland is a depression with no surface water outlet points = 3 Wetland has an intermittently flowing, or highly constricted, outlet points = 2 Wetland has an unconstricted surface outlet points = 1 Wetland is flat and has no obvious outlet and/or outlet is a ditch points = 1	
D	D 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES points = 4 NO points = 0	
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest class): Wetland has persistent, ungrazed, vegetation $\geq 95\%$ of area points = 5 Wetland has persistent, ungrazed, vegetation $\geq 1/2$ of area points = 3 Wetland has persistent, ungrazed vegetation $\geq 1/10$ of area points = 1 Wetland has persistent, ungrazed vegetation $< 1/10$ of area points = 0	
D	D1.4 Characteristics of seasonal ponding or inundation. <i>This is the area of the wetland that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i> Area seasonally ponded is $> 1/2$ total area of wetland points = 4 Area seasonally ponded is $> 1/4$ total area of wetland points = 2 Area seasonally ponded is $< 1/4$ total area of wetland points = 0 NOTE: See text for indicators of seasonal and permanent inundation..	
D	Total for D 1 <i>Add the points in the boxes above</i>	
D	D 2. Does the wetland have the <u>opportunity</u> to improve water quality? (see p. 44) Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants.</i> — Grazing in the wetland or within 150 ft — Untreated stormwater discharges to wetland — Tilled fields or orchards within 150 ft of wetland — A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging — Residential, urban areas, golf courses are within 150 ft of wetland — Wetland is fed by groundwater high in phosphorus or nitrogen — Other _____ YES multiplier is 2 NO multiplier is 1	multiplier _____
D	TOTAL - Water Quality Functions Multiply the score from D1 by D2 <i>Add score to table on p. 1</i>	

D Depressional and Flats Wetlands		Points
HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation		
	D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion? (see p. 46)	
D	D 3.1 Characteristics of surface water flows out of the wetland	
	Wetland has no surface water outlet	points = 4
	Wetland has an intermittently flowing, or highly constricted, outlet	points = 2
	Wetland is flat and has no obvious outlet and/or outlet is a small ditch	points = 1
	Wetland has an unconstricted surface outlet	points = 0
D	D 3.2 Depth of storage during wet periods	
	<i>Estimate the height of ponding above the bottom of the outlet</i>	
	Marks of ponding are 3 ft or more above the surface	points = 7
	The wetland is a "headwater" wetland"	points = 5
	Marks of ponding between 2 ft to < 3 ft from surface	points = 5
	Marks are at least 0.5 ft to < 2 ft from surface	points = 3
	Wetland is flat but has small depressions on the surface that trap water	points = 1
	Marks of ponding less than 0.5 ft	points = 0
D	D 3.3 Contribution of wetland to storage in the watershed	
	<i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland itself.</i>	
	The area of the basin is less than 10 times the area of wetland	points = 5
	The area of the basin is 10 to 100 times the area of the wetland	points = 3
	The area of the basin is more than 100 times the area of the wetland	points = 0
	Wetland is in the FLATS class (basin = the wetland, by definition)	points = 5
D	Total for D 3 <i>Add the points in the boxes above</i>	
D	D 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? (see p. 49)	
	Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater.	
	<i>Note which of the following indicators of opportunity apply.</i>	
	— Wetland is in a headwater of a river or stream that has flooding problems	multiplier _____
	— Wetland drains to a river or stream that has flooding problems	
— Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems		
— Other _____		
	YES multiplier is 2 NO multiplier is 1	
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	

Comments

R	Riverine and Freshwater Tidal Fringe Wetlands	Points
HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion		
	R 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion? <i>(see p. 54)</i>	
R	R 3.1 Characteristics of the overbank storage the wetland provides: <i>Estimate the average width of the wetland perpendicular to the direction of the flow and the width of the stream or river channel (distance between banks). Calculate the ratio: (width of wetland)/(width of stream).</i> If the ratio is more than 20 points = 9 If the ratio is between 10 – 20 points = 6 If the ratio is 5- <10 points = 4 If the ratio is 1- <5 points = 2 If the ratio is < 1 points = 1	
R	R 3.2 Characteristics of vegetation that slow down water velocities during floods: <i>Treat large woody debris as "forest or shrub". Choose the points appropriate for the best description.</i> Forest or shrub for >1/3 area OR Emergent plants > 2/3 area points = 7 Forest or shrub for > 1/10 area OR Emergent plants > 1/3 area points = 4 Vegetation does not meet above criteria points = 0	
R	Add the points in the boxes above	
R	R 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? <i>(see p. 57)</i> Answer YES if the wetland is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. <i>Note which of the following conditions apply.</i> — There are human structures and activities downstream (roads, buildings, bridges, farms) that can be damaged by flooding. — There are natural resources downstream (e.g. salmon redds) that can be damaged by flooding — Other _____ <i>(Answer NO if the major source of water to the wetland is controlled by a reservoir or the wetland is tidal fringe along the sides of a dike)</i> YES multiplier is 2 NO multiplier is 1	multiplier _____
R	TOTAL - Hydrologic Functions Multiply the score from R 3 by R 4 <i>Add score to table on p. 1</i>	

Comments

L Lake-fringe Wetlands		Points
WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality		
L	L 1. Does the wetland have the <u>potential</u> to improve water quality? (see p. 59)	
L	L 1.1 Average width of vegetation along the lakeshore : Vegetation is more than 33ft (10m) wide points = 6 Vegetation is more than 16 (5m) wide and <33ft points = 3 Vegetation is more than 6ft (2m) wide and <16 ft points = 1 Vegetation is less than 6 ft wide points = 0	
L	L 1.2 Characteristics of the vegetation in the wetland: <i>choose the appropriate description that results in the highest points, and do not include any open water in your estimate of coverage. In this case the herbaceous plants can be either the dominant form (called emergent class) or as an understory in a shrub or forest community.</i> Herbaceous plants cover >90% of the vegetated area points = 6 Herbaceous plants cover >2/3 of the vegetated area points = 4 Herbaceous plants cover >1/3 of the vegetated area points = 3 Other vegetation that is not aquatic bed in > 2/3 vegetated area points = 3 Other vegetation that is not aquatic bed in > 1/3 vegetated area points = 1 Aquatic bed cover > 2/3 of the vegetated area points = 0	
L	Add the points in the boxes above	
L	L 2. Does the wetland have the <u>opportunity</u> to improve water quality? (see p. 61) Answer YES if you know or believe there are pollutants in the lake water, or surface water flowing through the wetland to the lake is polluted. <i>Note which of the following conditions provide the sources of pollutants.</i> — Wetland is along the shores of a lake or reservoir that does not meet water quality standards — Grazing in the wetland or within 150ft — Polluted water discharges to wetland along upland edge — Tilled fields or orchards within 150 feet of wetland — Residential or urban areas are within 150 ft of wetland — Parks with grassy areas that are maintained, ballfields, golf courses (all within 150 ft. of lake shore) — Power boats with gasoline or diesel engines use the lake — Other _____ YES multiplier is 2 NO multiplier is 1	multiplier _____
L	TOTAL - Water Quality Functions Multiply the score from L1 by L2 Add score to table on p. 1	
Comments		

L Lakefringe Wetlands		Points
HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce shoreline erosion		
L	L 3. Does the wetland have the <u>potential</u> to reduce shoreline erosion? (see p. 62)	
L	<p>L 3 Average width and characteristics of vegetation along the lakeshore (do not include aquatic bed): (choose the highest scoring description that matches conditions in the wetland)</p> <p>> ¾ of fringe vegetation is shrubs or trees at least 33 ft (10m) wide points = 6</p> <p>> ¾ of fringe vegetation is shrubs or trees at least 6 ft. (2 m) wide points = 4</p> <p>> ¼ of fringe vegetation is shrubs or trees at least 33 ft (10m) wide points = 4</p> <p>Fringe vegetation is at least 6 ft (2m) wide points = 2</p> <p>Fringe vegetation is less than 6 ft (2m) wide points = 0</p>	
L	Record the points from the box above	
L	<p>L 4. Does the wetland have the <u>opportunity</u> to reduce erosion? (see p. 63)</p> <p>Are there features along the shore that will be impacted if the shoreline erodes? Note which of the following conditions apply.</p> <ul style="list-style-type: none"> — There are human structures and activities along the upland edge of the wetland (buildings, fields) that can be damaged by erosion. — There are undisturbed natural resources along the upland edge of the wetland (e.g. mature forests other wetlands) than can be damaged by shoreline erosion — Other _____ <p>YES multiplier is 2 NO multiplier is 1</p>	multiplier
L	<p>TOTAL - Hydrologic Functions Multiply the score from L 3 by L 4</p> <p>Add score to table on p. 1</p>	

Comments

S Slope Wetlands		Points
WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality		
S	S 1. Does the wetland have the <u>potential</u> to improve water quality? (see p. 64)	
S	S 1.1 Characteristics of average slope of wetland: Slope is 1% or less (<i>a 1% slope has a 1 foot vertical drop in elevation for every 100 ft horizontal distance</i>) points = 3 Slope is 1% - 2% points = 2 Slope is 2% - 5% points = 1 Slope is greater than 5% points = 0	
S	S 1.2 The soil 2 inches below the surface is clay, organic, or smells anoxic (hydrogen sulfide or rotten eggs). YES = 3 points NO = 0 points	
S	S 1.3 Characteristics of the vegetation in the wetland that trap sediments and pollutants: <i>Choose the points appropriate for the description that best fits the vegetation in the wetland. Dense vegetation means you have trouble seeing the soil surface.</i> Dense, ungrazed, herbaceous vegetation > 90% of the wetland area points = 6 Dense, ungrazed, herbaceous vegetation > 1/2 of area points = 3 Dense, woody, vegetation > 1/2 of area points = 2 Dense, ungrazed, herbaceous vegetation > 1/4 of area points = 1 Does not meet any of the criteria above for vegetation points = 0	
S	Total for S 1 <i>Add the points in the boxes above</i>	
S	S 2. Does the wetland have the <u>opportunity</u> to improve water quality? (see p. 67) Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants.</i> — Grazing in the wetland or within 150ft — Untreated stormwater discharges to wetland — Tilled fields, logging, or orchards within 150 feet of wetland — Residential, urban areas, or golf courses are within 150 ft upslope of wetland — Other _____ YES multiplier is 2 NO multiplier is 1	multiplier _____
S	TOTAL - Water Quality Functions Multiply the score from S1 by S2 <i>Add score to table on p. 1</i>	
Comments		

S Slope Wetlands		Points
HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream erosion		
S	S 3. Does the wetland have the <u>potential</u> to reduce flooding and stream erosion? (see p. 68)	
S	S 3.1 Characteristics of vegetation that reduce the velocity of surface flows during storms. Choose the points appropriate for the description that best fit conditions in the wetland. Dense, uncut, rigid vegetation covers > 90% of the area of the wetland. (stems of plants should be thick enough (usually > 1/8in), or dense enough, to remain erect during surface flows) points = 6 Dense, uncut, rigid vegetation > 1/2 area of wetland points = 3 Dense, uncut, rigid vegetation > 1/4 area points = 1 More than 1/4 of area is grazed, mowed, tilled or vegetation is not rigid points = 0	
S	S 3.2 Characteristics of slope wetland that holds back small amounts of flood flows: The slope wetland has small surface depressions that can retain water over at least 10% of its area. YES points = 2 NO points = 0	
S	Add the points in the boxes above	
S	S 4. Does the wetland have the <u>opportunity</u> to reduce flooding and erosion? (see p. 70) Is the wetland in a landscape position where the reduction in water velocity it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows? Note which of the following conditions apply. — Wetland has surface runoff that drains to a river or stream that has flooding problems — Other _____ (Answer NO if the major source of water is controlled by a reservoir (e.g. wetland is a seep that is on the downstream side of a dam) YES multiplier is 2 NO multiplier is 1	multiplier _____
S	TOTAL - Hydrologic Functions Multiply the score from S 3 by S 4 Add score to table on p. 1	

Comments

These questions apply to wetlands of all HGM classes.

Points

HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat

H 1. Does the wetland have the potential to provide habitat for many species?

H 1.1 Vegetation structure (see p. 72)

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed
- ☐ Emergent plants
- ☐ Scrub/shrub (areas where shrubs have >30% cover)
- ☐ Forested (areas where trees have >30% cover)
- ☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

- | | |
|-----------------|------------|
| 4 types or more | points = 4 |
| 3 types | points = 2 |
| 2 types | points = 1 |
| 1 type | points = 0 |

H 1.2. Hydroperiods (see p. 73)

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- | | | |
|--|-------------------------|------------|
| <input type="checkbox"/> Permanently flooded or inundated | 4 or more types present | points = 3 |
| <input type="checkbox"/> Seasonally flooded or inundated | 3 types present | points = 2 |
| <input type="checkbox"/> Occasionally flooded or inundated | 2 types present | point = 1 |
| <input type="checkbox"/> Saturated only | | |
| <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland | | |
| <input type="checkbox"/> Lake-fringe wetland = 2 points | | |
| <input type="checkbox"/> Freshwater tidal wetland = 2 points | | |

H 1.3. Richness of Plant Species (see p. 75)

Count the number of plant species in the wetland that cover at least 10 ft². (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle

- | | | |
|---|----------------|------------|
| <i>If you counted:</i> | > 19 species | points = 2 |
| <i>List species below if you want to:</i> | 5 - 19 species | points = 1 |
| | < 5 species | points = 0 |

H 1.4. Interspersion of habitats (see p. 76)

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



None = 0 points

Low = 1 point

Moderate = 2 points



High = 3 points

[riparian braided channels]

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".

H 1.5. Special Habitat Features: (see p. 77)

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.

- ___ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).
- ___ Standing snags (diameter at the bottom > 4 inches) in the wetland
- ___ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)
- ___ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present
- ___ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (*structures for egg-laying by amphibians*)
- ___ Invasive plants cover less than 25% of the wetland area in each stratum of plants

H 1. TOTAL Score - potential for providing habitat
Add the scores in the column above

Comments

H 2. Does the wetland have the opportunity to provide habitat for many species?

H 2.1 Buffers (see p. 80)

Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."

- 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer.
(relatively undisturbed also means no-grazing) **Points = 5**
 - 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4**
 - 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4**
 - 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference. **Points = 3**
 - 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3**
- If buffer does not meet any of the three criteria above**
- No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**
 - No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2**
 - Heavy grazing in buffer. **Points = 1**
 - Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland **Points = 0.**
 - Buffer does not meet any of the criteria above. **Points = 1**

H 2.2 Corridors and Connections (see p. 81)

H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor*).

YES = 4 points (go to H 2.3) NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = 2 points (go to H 2.3) NO = H 2.2.3

H 2.2.3 Is the wetland:

- within 5 mi (8km) of a brackish or salt water estuary OR
- within 3 mi of a large field or pasture (>40 acres) OR
- within 1 mi of a lake greater than 20 acres?

YES = 1 point

NO = 0 points

H 2.3 Near or adjacent to other priority habitats listed by WDFW (see p. 82)

Which of the following priority habitats are within 330ft (100m) of the wetland?
(see text for a more detailed description of these priority habitats)

- ☐ **Riparian:** The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.
- ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.8 ha (2 acres).
- ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft.
- ☐ **Old-growth forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age.
- ☐ **Mature forests:** Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.
- ☐ **Prairies:** Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.
- ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.
- ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages
- ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.
- ☐ **Urban Natural Open Space:** A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other *priority habitats*, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.
- ☐ **Estuary/Estuary-like:** Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.
- ☐ **Marine/Estuarine Shorelines:** Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).

If wetland has **3 or more** priority habitats = **4 points**

If wetland has **2** priority habitats = **3 points**

If wetland has **1** priority habitat = **1 point**

No habitats = 0 points

<p>H 2.4 Wetland Landscape (<i>choose the one description of the landscape around the wetland that best fits</i>) (<i>see p. 84</i>)</p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3</p> <p>The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3</p> <p>There is at least 1 wetland within ½ mile. points = 2</p> <p>There are no wetlands within ½ mile. points = 0</p>	
<p style="text-align: right;">H 2. TOTAL Score - opportunity for providing habitat <i>Add the scores in the column above</i></p>	
<p>Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1</p>	

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type	Category
<p><i>Check off any criteria that apply to the wetland. Circle the appropriate Category when the appropriate criteria are met.</i></p> <p>SC 1.0 Estuarine wetlands (see p. 86)</p> <p>Does the wetland meet the following criteria for Estuarine wetlands?</p> <ul style="list-style-type: none"> — The dominant water regime is tidal, — Vegetated, and — With a salinity greater than 0.5 ppt. <p>YES = Go to SC 1.1 NO ____</p>	
<p>SC 1.1 Is the wetland within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151?</p> <p>YES = Category I NO go to SC 1.2</p>	<p>Cat. I</p>
<p>SC 1.2 Is the wetland at least 1 acre in size and meets at least two of the following three conditions? YES = Category I NO = Category II</p> <ul style="list-style-type: none"> — The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native <i>Spartina</i> spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of <i>Spartina</i> would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of <i>Spartina</i> in determining the size threshold of 1 acre. — At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. — The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands. 	<p>Cat. I</p> <p>Cat. II</p> <p>Dual rating</p> <p>I/II</p>

<p>SC 2.0 Natural Heritage Wetlands (see p. 87) Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.</p> <p>SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? <i>(this question is used to screen out most sites before you need to contact WNHP/DNR)</i> S/T/R information from Appendix D ____ or accessed from WNHP/DNR web site ____</p> <p>YES ____ – contact WNHP/DNR (see p. 79) and go to SC 3.2 NO ____</p> <p>SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO ____</p>	<p>Cat. I</p>
<p>SC 3.0 Bogs (see p. 87) Does the wetland (or part of the wetland) meet both the criteria for soils and vegetation in bogs? <i>Use the key below to identify if the wetland is a bog. If you answer yes you will still need to rate the wetland based on its functions.</i></p> <ol style="list-style-type: none"> 1. Does the wetland have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 No - go to Q. 2 2. Does the wetland have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond? Yes - go to Q. 3 No - Is not a bog for purpose of rating 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)? Yes – Is a bog for purpose of rating No - go to Q. 4 NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog. 3. Is the wetland forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (> 30% coverage of the total shrub/herbaceous cover)? <p>4. YES = Category I No ____ Is not a bog for purpose of rating</p>	<p>Cat. I</p>

SC 4.0 Forested Wetlands (see p. 90)

Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

- **Old-growth forests:** (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and “OR” so old-growth forests do not necessarily have to have trees of this diameter.

- **Mature forests:** (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

YES = Category I

NO _____

Cat. I

SC 5.0 Wetlands in Coastal Lagoons (see p. 91)

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

- The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks
- The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*)

YES = Go to SC 5.1

NO___ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

- The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).
- At least ¼ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.
- The wetland is larger than 1/10 acre (4350 square feet)

YES = Category I

NO = Category II

Cat. I

Cat. II

<p>SC 6.0 Interdunal Wetlands (see p. 93)</p> <p>Is the wetland west of the 1889 line (also called the Western Boundary of Upland Ownership or WBUO)?</p> <p>YES - go to SC 6.1 NO ___ not an interdunal wetland for rating</p> <p><i>If you answer yes you will still need to rate the wetland based on its functions.</i></p> <p>In practical terms that means the following geographic areas:</p> <ul style="list-style-type: none"> • Long Beach Peninsula- lands west of SR 103 • Grayland-Westport- lands west of SR 105 • Ocean Shores-Copalis- lands west of SR 115 and SR 109 <p>SC 6.1 Is the wetland one acre or larger, or is it in a mosaic of wetlands that is once acre or larger?</p> <p>YES = Category II NO – go to SC 6.2</p> <p>SC 6.2 Is the wetland between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre?</p> <p>YES = Category III</p>	<p></p> <p>Cat. II</p> <p>Cat. III</p>
<p>Category of wetland based on Special Characteristics</p> <p><i>Choose the "highest" rating if wetland falls into several categories, and record on p. 1.</i></p> <p>If you answered NO for all types enter: "Not Applicable" on p. 1.</p>	<p></p>